

Notice of Allowability

Application No.

10/550,285

Examiner

MCDIEUNEL MARC

Applicant(s)

HOSOKAWA ET AL.

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3664

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 5/11/2009.
2. ☒ The allowed claim(s) is/are 1-21.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).
- * Certified copies not received: ____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date ____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date ____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).**
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input checked="" type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date <u>5/21/2009</u> . |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>5/11/2009</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other ____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Daniel P. Lent, Reg., 44,867 on Thursday, May 21, 2009.

The application has been amended as follows:

Claim 22 has been canceled.

Allowable Subject Matter

2. Claims 1-11 and 13-21 are allowed.
3. The following is an examiner's statement of reasons for allowance:

The prior art of record fail to teach or fairly suggest with respect to claim 1, a robot simulation device an environment defining ("ED") means for providing a virtual robot working environment in which a virtual robot works in a virtual working space where virtual obstacles are disposed, said virtual robot having a task of transferring a virtual object from a start point to a goal point, said ED means including a path determining means for determining a path of travel of said virtual object associated with said task of said virtual robot by designating via- points

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between said start point and said goal point; and a task simulation executing and displaying ("TSED") means responsive to said ED means and said path determining means for executing simulation of said task of said virtual robot and displaying said executed simulation on a display; said TSED means including; a robot activity region determining and displaying means for determining from said determined path of travel of said virtual object a robot activity region where a moveable portion of said virtual region moves to achieve said task and for displaying said robot activity region on said display; and an interference region determining and displaying means responsive to said robot activity region for determining whether and where said task is interfered by said virtual obstacles thereby providing an interference region where said task is interfered by said virtual objects and for displaying said interference region on said display; whereby a desired executed simulation is obtained, in which said virtual robot successfully transfers said virtual object from said start point to said goal point without being; with respect to claim 13, a method of robot simulation comprising the steps of providing a virtual robot working environment in which a virtual robot works in a virtual working space where virtual obstacles are disposed, said virtual robot having a task of transferring a virtual object from a start point to a goal point, including determining a path of travel of said virtual object associated with said task of said virtual robot by designating via- points between said start point and said goal point; and executing simulation of said task of said virtual robot and displaying said executed simulation on a display, including; determining from said determined path of travel of said virtual object a robot activity region where a moveable portion of said virtual robot moves to achieve said task, and displaying said robot activity region on said display; and determining an interference region by determining whether and where said task is interfered by said virtual obstacles, and displaying

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said interference region on said display, obtaining a desired executed simulation in which said virtual robot successfully transfers said virtual object from said start point to said goal point without being interfered by said virtual obstacles in combination with the other elements and features of the claimed invention.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to MCDIEUNEL MARC whose telephone number is (571)272-6964. The examiner can normally be reached on 6:30-5:00 Mon-Thu.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Khoi Tran can be reached on (571) 272-6919. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/McDieunel Marc/

Examiner, Art Unit 3664

Thursday, May 21, 2009

/KHOI TRAN/

Supervisory Patent Examiner, Art Unit 3664